

# NATIONAL RECORDER.

Containing Essays upon subjects connected with Political Economy, Science, Literature, &c.; Papers read before the Agricultural Society of Philadelphia; a Record of passing Events; Selections from Foreign Magazines, &c. &c.

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## Miscellany.

FOR THE NATIONAL RECORDER.

### MATERIALISM.

Berkeley's argument against the existence of a material world, is thus stated by Dr. Reid: "If we have any knowledge of a material world, it must be by the senses: but by the senses we have no knowledge, but of our sensations only; and our sensations, which are attributes of mind, can have no resemblance to any qualities of a thing that is inanimate." It is observed by Dr. R., that "the only proposition in this demonstration which admits of doubt, is, that by our senses we have the knowledge of our sensations only, and of nothing else. Grant this, and the conclusion is irresistible."—*Stewart's Essays*, note E.

Now it appears to me, that the fallacy consists in making it appear that the fact that our sensations can have no resemblance to any qualities of a thing that is inanimate, is connected with the question. It does not bear upon the point, but is merely a verbal dispute. And when we say that we have a sensation of heat, from the action of fire upon us; we do not mean to assert that fire is similar to the sensation that we have, but that it causes that sensation. Though it be allowed that there is nothing in things inanimate, that is similar to our sensations of them, this will not disprove their existence; which is as clearly proved by their producing sensations, as it would be by establishing it as a truth, that those sensations resemble them.

Though this seems perfectly clear to me, I am afraid, from its opposition to the opinions of Stewart and Reid, that there is some fallacy in it, and would therefore respectfully invite a discussion of the question. R.

From the *New York Literary Journal*.

### EDUCATION IN THE UNITED STATES.

NO. III.

In my last I gave a sketch of some of the prominent advantages attending a pro-

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per cultivation of classical literature. It is obvious, that in this country these advantages can never be realized in their full extent, unless some radical reformation take place in our system of instruction. Although scarcely a hope is entertained that this will soon be accomplished, I shall nevertheless concisely advert to some of the abuses, the correction of which must precede the establishment of classical learning upon a solid and durable foundation.

The *fundamental error* pervading the system of classical education in the United States, is the deficiency in our school instruction, preliminary to an entrance into our colleges. This is an evil so great and so obvious, that it has not failed to attract the attention of the guardians of our literature: and some honourable efforts have been made to rectify it. These, however, have been limited in their influence, and will not very materially affect the character, which we shall be constrained to give of the general practice in this country. As our literary institutions vary somewhat in their requirements, no general statement can be of universal application. But it will not be considered very wide of the truth to assert, that a boy of ordinary capacity can acquire in two, or at most three years, all the knowledge of Greek and Latin that is necessary to insure a reputable admission into most of our colleges. In proof of this, it need only be stated, that the statutes of the generality of our literary colleges require from the candidates, nothing more than an acquaintance with the Greek Testament, Virgil's *Æneid*, and Cicero's Select Orations, either in whole or in part. It is not pretended, that the same authors are required in the different institutions; they are the actual requirements in some, and are a fair specimen of the *extent* of classical reading that is demanded in most of the others. There are some honourable exceptions, which we are proud to mention; one of which shall be noticed more particularly hereafter. I refer to Columbia College, and Harvard University, in both of which classical erudition is com-

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manding a very large share of attention, and they bid fair to have a powerful influence in establishing the classical character of our country. Most of our colleges, however, are very far from attaching the same degree of importance to this branch of knowledge. And it is to them that we must principally attribute the contracted course of our preliminary studies. The college must necessarily become the standard to the school, and the terms prescribed by the former will inevitably be the limit to the acquisitions of the latter. It is thus, that scanty preliminary attainments are countenanced and even sanctioned by our highest literary institutions; and the whole system throughout is again upheld by popular opinion, which is unquestionably hostile to an expanded plan of classical instruction. It is obvious that a system thus supported and fortified by public sentiment and established usage, will not easily or speedily be overturned.

If any thing, however, is to be done in the way of effectual reform, this error must primarily be corrected. We never shall be able to rear a succession of thorough bred scholars in this country, until our schools assume something of the character of those celebrated schools of Eton and Westminster, which, perhaps, more than her universities, have been the substantial props of English literature. In these institutions a complete course embraces *ten* years, and experience has decided that time not to be too long. Now, if ten years are found necessary at these celebrated seminaries to form good classical scholars, by what magic, it may be asked, are they to be made in the United States in three or four? It is useless to object, that this is an unreasonable sacrifice of life and industry in the acquisition of a single branch of knowledge. The experience of European nations is a sufficient refutation to this assertion; for their greatest men have been formed upon this very system. In this country, other notions unhappily prevail; and it is argued, that most of our young men are intended for active business, and, therefore, they ought not to devote so much of their time to acquiring a knowledge of Greek and Latin. The fact contained in this objection cannot be doubted; but I deny that it is at all applicable. It is not necessary that young men, who are designed for commercial pursuits, should spend *any* time upon these studies. I should imagine it just as essential for a blacksmith to understand astronomy, as for them to be acquainted with the dead languages. No!

there are other and more useful pursuits to which they should direct their attention. But, at any rate, if they are ambitious of aspiring to classical erudition, let not *their* convenience be consulted at the expense of sound and solid learning. It is, indeed, prostituting the sacred cause of literature, to place on a level the high attributes of the scholar, with the meagre and paltry acquisitions that suffice for the dealer in dry goods or in hardware. It is high time that this should be corrected; and until it is, we shall continue to witness the disgraceful sight of men, with no other pretensions than an ordinary education, pluming themselves upon their acquisitions, and with no other pioneers than ignorance and conceit, venturing on the most difficult paths of literature. Illustrations are needless; they must suggest themselves at once to every reader; and it is to this circumstance that the low state of our literature may, in a great degree, be referred, as well as the contempt in which it is held abroad.

Another error in our system of classical education, is to be found in the *manner* in which it is conducted in our colleges. In this respect our colleges are literally converted into grammar schools, where the pupil is led to believe that the study of languages implies nothing more than simply translating, declining, and conjugating words. This degradation of our literary institutions depends so intimately upon the deficiency in the preliminary course, that, we shall never cease to lament the one until the other has been rectified.

To give some idea how classical tuition should be conducted, so as to derive from it all the high benefits which it may confer, I shall present the following account of the mode in which it is pursued in the University of Glasgow, taken from a work entitled "a View of the System of Education at present pursued in the schools and universities of Scotland." By the Rev. M. Russel, M. A.

"Let it not be imagined that the readings which I have mentioned are the meagre, verbal translation, which gives the meaning of an author and nothing more; for they are not only accompanied with a careful analysis of words and sentences into their etymological principles; but are also made the subjects of interesting speculations on the laws of human thought and feeling; on the progress of refinement and intelligence among the nations of antiquity; on their legislation, government, and customs, their manners in peace, their practices in war, and, in short, on every



thing that is suggested by the literature of those renowned states, which spoke the Greek and Roman tongues. The students in these classes have presented to them the philosophy of language, and the theory of universal grammar; and the whole business is calculated, not so much *to add to their stock of literature or mere vocabulary of words, as to supply materials for reasoning on those faculties of mind which carry men to produce and to admire works of genius*: for tracing distinctions in style to certain habits of thought and characters of feeling in nations and individuals; for pointing out beauties of universal acceptance, as well as the varying hues of local and transitory ornament, which circumstances alone could have recommended; for explaining, in short, the canons of Catholic taste and criticism, and thus establishing their authority on the basis of knowledge, as well as on that of faith and tradition." p. 63, 64.

This is certainly a model worthy of universal imitation: and, it is only by adopting such a course, that our colleges can be expected to "send forth taste, eloquence and strong reasoning powers," and that we can hope to see issuing from them "a stream of matured intellect, instead of trifling, as the American colleges have been too much accustomed to do, by ringing the changes upon the alphabet and syllables of their classical horn book."\*

The correspondent who has kindly sent us the following paper, received by him from England, will please accept our thanks. We have, however, little hope that any effectual assistance can be given to the poor, in any other way than by giving them a good education, and teaching them to depend on themselves. In savings banks, to which our correspondent alludes, the depositors pay all the expenses, and receive no assistance, other than that derived from the aggregation of their deposits. *This is to be the final result of the Dorking Association.*

### *On the Means of alleviating the Condition of the Poor.*

TO THE EDITOR OF THE COUNTY CHRONICLE.

Sir—Passing a few days since through the town of Dorking, my attention was powerfully excited by a printed statement which accident threw in my way, detailing some particulars of an institution formed in that town for assisting the poorer classes of society.

The increased and rapidly increasing number of our poor, is a subject of such general and paramount importance, that I cannot doubt your

readily affording publicity, through the medium of your journal, to such particulars as I have collected regarding a society, which appears to have taken up this important question on a principle, which, if not absolutely novel, has at least in no other instance within my knowledge been carried into such complete effect.

As your columns will not admit of minute detail, I will as concisely as possible, state the plan and object of this establishment, in the anxious hope that the subject may attract public attention.

Although of inconsiderable extent, the parish of Dorking is strictly agricultural, being destitute of a single manufactory, and contains, according to the enumeration of 1811, a population of only 3,259 souls. From the well known beauty of the surrounding neighbourhood, it is perhaps more thickly studded with seats and villas than any part of the island, and it may be confidently asserted, that in no vicinage is the benevolence of their opulent possessors more generally and more liberally dispensed; and as every mansion necessarily furnishes employment for labourers, whose comforts become invariably an object of benevolent solicitude with their employers, a diminished number of parochial poor must be an evident consequence. Hence with this preventive aid, the equable demand for labour, created by agriculture, and an absolute exemption from the incertitude and fluctuation arising from manufacturing employment, it were natural to conclude, that the number of individuals requiring permanent or occasional parochial relief must be comparatively small.

Judge, then, of my astonishment on finding from authentic documents, that in the year 1816, of a population, as I have stated, of only 3,259 souls, no fewer than *one-third* had in that year received permanent or occasional relief from the parish! This extraordinary fact, coupled with the then decreasing rate of wages, and increasing difficulty of obtaining agricultural employment, excited such deep and general anxiety, that the late earl of Rothes, in conjunction with the neighbouring gentry, proposed a public meeting of the inhabitants, to take the subject into consideration. At that meeting much valuable information, the result of minute inquiry and mature reflection, was communicated.

That a superfluity of labourers, with a concurrent reduction in the price of labour, should have a direct tendency to increase pauperism, is incontrovertible. An opinion, nevertheless, was entertained, by such as had patiently and dispassionately investigated the subject, that however the difficulties of the labourer might be aggravated by these fortuitous circumstances, he nevertheless, for the most part, is accessory to his own misery, by the inconsiderate and improvident manner in which the produce of his labour is usually applied. If, in other classes, frugality, self denial, prudent management, and a consideration of future wants, be essential to the attainment of independence and comfort, how much more indispensable is the rigorous exercise of these qualities in the management of the labourer's pittance!

But, whether from the result of ignorance, irresolution, or despair, the labourer certainly appears to drag on existence, regardless of all

\* Dr. Mason.



future necessities, so that the wants of the present moment be but supplied.

Take his case, such as it will be found in so large a majority of instances that it may be said to be general.

Marriages in this class are certainly contracted at a much earlier period than was formerly customary; hence the probability of either party having amassed any property by saving is greatly diminished. Possessing health and industry, the wages of a married labourer will sustain him in comparative ease and comfort until a rising offspring shall awaken him to a sense of difficulty and embarrassment. No provident anticipation, no prudent self denial, having furnished him with means to provide for this natural consequence of marriage, he now perhaps first submits to privation, and this may be termed the stage of *ignorance*. With an increase of family increases his difficulty, and the necessity of arresting its progress, by the adoption of a new principle of domestic management. But those wants which the produce of his labour cannot now supply, his *credit* with the baker, and the chandler's shop can furnish—this is the stage of *irresolution*. That which he thus procures on credit, is purchased often under incalculable and notorious disadvantages of price, quality, quantity, and season; and thus he rushes on in his career towards pauperism, until credit being extended to the utmost point, the weekly produce of his labour is absorbed by payments in reduction of existing debts, *with permission to contract new ones to an equal amount*. Thus he becomes bound hand and foot as to his dealings. To this consummation of his thralldom succeeds *despair*; and finally he resorts to that fatal and humiliating resource—the *parish*! With his independence he now loses that honest, proud, and manly feeling, which once distinguished the labouring class of England—justifies his conduct by the hacknied sophism of the poor having a right to be maintained by the rich—and the last spark of shame extinguished, he heartily joins in

“ Hang sorrow and drive away care,  
“ The parish is bound to find us.”

Such is the progress and descent of the labourer to parochial pauperism. Let such as have deliberately viewed the picture, say if it be overcharged. With this view of the subject, it were obvious that mere pecuniary donation, however liberally conferred, could afford no *permanent* relief to the labourer; his habits remaining unchanged, the money in many instances would be injudiciously exhausted, and in others would probably be only applied in the partial liquidation of old shop debts.

To make the labouring class become contributors to a fund, in which they finally should be the sole participators, unquestionably might appear to savour of paradox. It was, however, resolved to make the attempt; and in defiance of the prejudices and objections of the labouring poor, it has been carried into effect with a degree of success exceeding the most sanguine expectations. The society having laid down their system, proceeded to the execution of their plan; and having, with some modifications, continued it from the summer of 1816, I shall state their customary mode of procedure.

Early in the spring, on a day previously an-

nounced, the names are registered of such persons of the labouring class as intimate a desire to become contributors to the fund, from which they will be entitled to relief in the following winter season. They are required to state the number of individuals in their families—the articles with which they desire to be supplied from the institution store, whether bread or flour—the quantity of each article absolutely necessary for the proper sustentation of themselves, and families, as well as the quantity of fuel requisite for their comfort; great caution being taken that no individual subscriber shall, during the inclement season, be deprived of a full and perfect supply of these articles; the quantities being calculated for sixteen weeks, the prescribed period in which they are furnished. A classification of the contributors being completed, sixteen tickets are prepared for each subscriber, of which one is to be used weekly in succession during the season. They are allowed the option of four days in the spring, summer, and autumn months, to purchase such number of these sixteen tickets as is convenient to their circumstances; the price of which, and the addition that is made to them, being contained in the following table :

*Sum paid for the Tickets by the labouring class, and the sum for which they are received at the institution store.*

	s.	d.		s.	d.
Class 1. (Single people)	0	6	each	1	6
Class 2. (Two in family)	1	0	each	2	0
Class 3. (Three in family)	1	3	each	2	4
Class 4. (Four in family)	1	6	each	2	9
Class 5. (Five in family)	1	9	each	3	4
Class 6. (Six in family)	2	0	each	4	0
Class 7. (Seven in family)	2	2	each	4	6
Class 8. (Eight in family)	2	3	each	6	0
Class 9. (Nine in family)	2	4	each	6	6
Class 10. (Ten in family)	2	5	each	7	0

The difference between the price paid for the tickets, and that at which they are received, forms the additional assistance given by the institution to the subscriber. The gratuitous subscriptions, as well as the contributions of the poor, are always available at the commencement of the season, and immediately applicable as capital, in the purchase of flour and fuel, to be afterwards delivered to the labouring class subscribers, at the market price of the day. In the purchase of these necessities, it is perhaps superfluous to urge the almost incalculable disadvantage under which the poor man labours—destitute of the means to provide a stock at the proper season, his poverty is intolerably aggravated by the almost invariable advance in prices, during a period, in which, from the usual diminution of employment, his means are the most limited. Hence it is evident, that mere pecuniary aid afforded to the poor during winter, is misapplication of benevolence; for the same amount of money, judiciously applied, at an earlier season of the year, would afford, incontrovertibly, a much more considerable source of relief.

The society, therefore, steadily adhere to their principle, and invariably purchase as opportunity offers, *but for immediate payment only*, quantities of flour and coals adequate to the estimated demand for the ensuing season. The result has fully justified expectation, for taking due advantages of seasons and of markets, the society has been enabled to provide themselves



with these articles on terms so favourable, as to preclude all doubt of ultimately attaining their object, since, after having efficaciously assisted on an average, 200 families in each of the four past winters, the united parishioners', and non-parishioners' available fund already exceeds the important sum of 500*l*.

To secure, however, this essential capital, it became important at the establishment of the institution, that the gratuitous subscriptions should be numerous and considerable. But although the labouring class subscribers are now more numerous than they were, or have ever yet been, the voluntary subscriptions have gradually been diminished in individual amount, till in the present season, persons in the middle class of society contribute no more than 5*s*. each, but which small sum conjunctively with the subscriptions of the higher classes, will be found adequate to all the purposes of the institution.

Much of the success of this scheme has unquestionably depended on the acquirement of competent capital, and I am consequently pleased to find, that at the approach of the next winter, there is every reason to hope, that what with the surplus balance left over from the past year, and the annual subscriptions of the more affluent and poorer classes, the society will be in possession of a fund exceeding 800*l*! and which sum being judiciously applied in the purchase of the articles previously detailed, will, by its operation and effect, produce a most important relief to the labouring class at that period, without occasioning other, than a most inconsiderable charge to the gratuitous subscribers. Saving and profit, are thus united, in a degree incomparably superior to the principle of saving banks, as respects the working classes, from which the advantage can be but *four per cent.*, while the gains on bread, flour and fuel, are generally of considerable magnitude.

But before I proceed further, it may be necessary to notice certain *doubts* which have been suggested, whether the purchase of flour and fuel by contract for so extensive a body of poor, might not be deemed a species of injustice to the retail trader. The objection is however so futile, that it will be perhaps deemed unworthy of notice. It may, however, be observed, that while in every public institution, military, eleemosynary, and parochial, the system of providing food for numbers by contract is invariably adopted, it were difficult to suggest any plausible reason why pauperism should not be *prevented*, by the means that are recognized as legitimate, when it is unhappily *established*.

Thus by the exercise of a comparatively inconsiderable self denial, the honest and industrious labourer finds himself in a situation, at approach of winter, which affords the certain assurance of support during the customary suspension of agricultural labour.

Take, for instance, a subscriber of the fifth class, who having made payments on sixteen tickets, has laid up a fund of 28*s*.; to this is added a sum, which upon the sixteen tickets, amounts to 1*l*. 5*s*. 4*d*. partly furnished by the gratuitous subscriber, and partly arising from the profit which has been produced by the mode of purchasing the articles, making together an aggregate of 2*l*. 13*s*. 4*d*. equal to 3*s*. 4*d*. per week!

This he expends with the society in bread, or flour, and coals, in all, or any of these articles, as he chooses, of the very best quality, at the retail price of the day, precisely such as must be paid at any retail shop. The value of this assistance can only be appreciated by considering, that to subscribe 28*s*. during thirty-six weeks of spring, summer, and autumn, requires a subtraction from the earnings of a labourer in the fifth class, of only 9½*d*. per week, and for this timely and prudent forbearance, he is rewarded during sixteen weeks of winter, with the return of 3*s*. 4*d*.; a sum equal to what he could expect were he driven to the humiliation of requiring parochial relief! At the return of spring, he resumes his labour, in full possession of his independence, his character free from debt, and untainted by the odium of having been "*upon the parish*."

Until a capital adequate to the object of the society be established, some extraneous aid from gratuitous subscriptions will continue to be required. But the experience already derived from purchases and sales, furnishes a well grounded hope, that the adventitious aid will ultimately be essential only in seasons of extraordinary dearth or unusual severity. Acting on the principle which has thus been successfully adopted, this institution may be justly deemed to merit the appellation which they have assumed of "*Provident*," for upon "*provident frugality*" depends the title of the subscriber to assistance, and upon "*provident*" application of the fund, depends the power of affording it.

From the statement to which I alluded in the outset of this article, it appears, that during the year 1819, 144 families of parochial poor, and 55 families of non-parishioners, making in the aggregate 199 families, the representatives of upwards of 700 individuals, were contributors to the fund of the institution, and their united subscriptions amounted to 154*l*. The sum which was dispensed among them, by abatement in the price of their necessities, exceeded 380*l*. leaving these meritorious families a profit of upwards of 226*l*. to reward them for their provident precaution and self denial. The charge created on the fund for this considerable relief, averaged 7½*d*. per week for the entire number of each family, or 10*s*. only for 16 weeks' assistance, during one of the most rigorous and protracted seasons we have hitherto experienced. And so effectual did it prove, that the instances were very rare during that season, in which any subscriber required relief, and that when such application was made, it resulted solely from the utter impossibility of procuring any kind of employment.

As some proof of the salutary impression which has been made on the minds of the poor of that parish, I may be permitted to mention, that of the parochial poor 178 families, and 70 of the non-parishioners, have eagerly become contributors for the present year, and their aggregate subscriptions during the summer and autumn months, are estimated to amount to upwards of 250*l*. towards their own necessities in the next winter season.

Apprehending that I may already have trespassed too far on the space that can be afforded in the limited columns of a journal, I refrain from entering into a minute detail of calcula-

tions which might satisfactorily prove all that has been stated. It is sufficient for me to have shown, that the evils of poverty may not only be alleviated without the mischief and degradation of parochial relief, but that such an alleviation may be effected even by the contributions of the very sufferers?

In the infancy of this establishment there was much to encounter—jealousy, prejudice, and incredulity, all interposed obstacles against success; but conviction of the positive advantages and beneficial tendency of the system, has silenced every doubt; and it is most gratifying to find that the number of applicants for admission as subscribers, in the present year, so vastly exceed the past, independently of very many others who were rejected from causes creditable to the discernment and prudence of the society.

#### TOLLING OF BELLS.

I called to see my patient at the usual hour; the weather was oppressively warm, the windows and doors were open. She was a very interesting young woman. I had no hope of ever seeing her better; she had begun to realize that her end was approaching. Her mother was fanning her; and attempted, by disguised cheerfulness, to conceal her own dreadful apprehensions.

I observed in my patient a flush, and expression of anxiety and distress, not unlike what I had sometimes before seen in her, but not of so strong a cast. I inquired into her feeling and sensations, gently, and with great caution, lest I should alarm her: she turned her deep blue eyes upon me, and with more energy than I had remarked in her for some time, "Doctor," said she, "if you knew how that *hateful bell* strikes on my poor bewildered brain, you indeed would pity me." Seeming then to try to suppress the tears that were coming, "if," said she, "it had not such excruciating *regularity* of sound, I could bear it better; it strikes, and goes to my heart; and I recover from the misery it inflicts, just in time to spend some dreadful moments in expecting a repetition of my misery from the next succeeding blow. From me, all other sounds are fearfully kept away; but oh! how cruelly does *this one* break on the silence that reigns around me." I replied, that I had often seen, in the course of my practice, like suffering from the same cause; that the subject had been often mentioned to those who had authority in such matters, but still the custom continued.

"To whom," she answered, "can this custom be useful? Is it to mournful friends, who sit in silence and apprehension around the sick; to those who have ceased to hear, forever, as mortals; to those who follow

them to the place of the dead; to those who are contending with disease, and who are compelled to think on the chances and changes to which human beings are subject; and especially those of quickened sensibility, in whom susceptibility becomes at length incorporated with, and inseparable from, their disease?"

Perceiving how much her attempt to express herself increased the flush of her face and agitated her frame, and fearing the consequences of supervening debility, I told her that I would endeavour to have this evil suppressed by a petition of the inhabitants, or by what other means I could. She then turned her glistening eyes on her mother, who was hiding her emotions in her covered face—"My mother!" said she, "let no bell sound for me. Take me silently and tenderly to the tomb. Let not the few remaining hours of the declining or desponding sick be shortened or disturbed, because my days are numbered."

I have stood at the bed of the sick and the dying, I know not how often; but I came away now with a new impression.—*It seemed to me that the tolling of bells is a sort of homicide: if it shortens the life of any human being a moment, it is killing; else murder may have an excuse in this, that the party destroyed would at some time have died. I remembered to have seen a comparison of degrees of cruelty in different modes of torture; and among them all it was said, that the most cruel is that in which the victim is fixed, so that a large drop of water could fall, with undeviating regularity, on the top of the head. I believe that there is no custom, among civilized people, so useless for any purpose, and so distressing in many relations, as that of which my poor patient so feelingly complained. The next day she was wrapped in her shroud—but no bell announced her transit to the grave.*

[*Bost. D. Adv.*]

FROM A LATE LONDON PAPER.

#### THE PLAGUE OF AFRICA.

Various opinions having been propagated respecting the plague, as being contagious or noncontagious, and this important question having engaged much time of the committee of the House of Commons, it becomes at this period peculiarly interesting to know the disease, when it is spreading insidiously throughout the provinces of West and South Barbary; when it has already reached Morocco, the city of which Mogadore is the port; when the communi-



cation is open between Mogadore and Morocco, and when it has already raised its hydra head in the port of Saffy and in the province of Abda, distant only 60 miles from Mogadore, the only port in the empire of Morocco which maintains an uninterrupted commerce with London; and when in the common course of events, it is to be presumed that the next ships that shall arrive here from Mogadore may bring foul bills of health:—all this being premised, it cannot be now irrelevant to state a few facts respecting the African plague, by way of precaution against its introduction into this country.

That it is contagious there can be no doubt; and I think the following facts will prove it, in opposition to the opinion of some learned theorists on the subject:

In the great plague of Moscow, in 1771, which destroyed nearly 60,000 persons, Dr. de Mærtens, merely by strict attention to nonintercourse, preserved the foundling hospital of that city from the slightest infection. This institution contained one thousand persons; yet not one of them died, although for many months thousands were dying in the city around it. Dr. Mærtens's words are worthy of attention: "*Solo ægrorum et rerum infectarum contactu communicabatur, atque atmosphaera contagium non spargebat, sed sanissima semper fuit.*" (See Hist. Pest. Moscuens.) Dr. Oræus, physician to the empress Catherine, agrees in opinion with Dr. Mærtens.

Dr. Russell, who practised forty years at Aleppo, was in the habit of prescribing daily to crowds of people infected with this disease. He saw them from a chamber window, and used no kind of precaution beyond avoiding contact with their persons and clothes, or inhalation by the breath of the vapour from their bodies; and he lays it down as the result of his long experience, that he never knew an instance of a secluded family becoming infected, without being able to trace the misfortune to some accidental or unavoidable violation of the rules of confinement.

Mr. Papon, in the History of Provence, relates that the plague was introduced from Marseilles in 1720, into the town of Aix. The governor of the latter place put all the inhabitants under quarantine in their houses, and the disease soon disappeared. The restrictions were taken off somewhat prematurely, and the disease broke out anew, but was finally extinguished by a repetition and a more steady prosecution of the like means.

We have the strongest evidence to the

same effect in Jackson's account of Morocco. This gentleman, in an able description of the dreadful contagion which wasted that empire in 1799, and carried off no less than 124,500 souls, shows in the most convincing manner, that the disease was strictly contagious. One fact was very decisive, whilst the disease was raging at Mogadore, the small village of Diabet, only two miles to the southeast, remained for thirty-eight days uninfected; at last promiscuous intercourse conveyed the poison, and this small place, out of a population of 133, lost in the short space of 21 days, 100 persons by this fell scourge.

If any one thing could prove more forcibly than another that the disease is the product of personal contact, and not of any atmospherical contamination, it is the fact stated by Mr. Jackson, that instead of shutting himself up in his house like other Europeans, he rode out occasionally for exercise, and exposed himself freely to the air, still however avoiding suspicious communication. He had a separation of three feet wide made across the gallery of his house, between the kitchen and the dining parlour. From this place of separation he took the dishes with his own hands, and after meals returned them to the same spot, thus suffering none of his servants to come near him. He adopted similar precautions in his counting-house, to prevent the near approach of persons who might call on business, and made a practice of never receiving money but through vinegar. He himself escaped the plague, although he informs us his cook died of it. What augments the value of Mr. Jackson's testimony is, that not being a medical man, he cannot be suspected of any theoretical bias whatever.

### Agriculture.



"Let us cultivate the ground, that the poor, as well as the rich, may be filled; and happiness and peace be established throughout our borders."

In pursuance of the advice of some members

of the Philadelphia Agricultural Society, we shall occasionally publish an extract from the former volumes of transactions. The following piece (with several others which shall be published) has been recommended to us.

#### ON PEACH TREES.

*By Joseph Cooper, of New Jersey.*

Read January 14th, 1806.

In looking over an almanac\* for the present year, I observed a piece giving information, that peach trees had been preserved in the neighbourhood of Philadelphia, by removing the earth from the roots, after the first hard frost, in the fall, and returning it again in the spring, and oiling the body three or four feet from the ground, with common lamp oil.

The author likewise observes, that peach trees that stand in hedge rows and thickets, thrive better than others in cleared ground, which had suggested the idea, of defending the body of the tree, by wisps of straw, to prevent the attack of insects.

I take the liberty to make some observations on the piece alluded to.

In the first place, I think the taking the earth from the roots of peach trees, in the fall, dangerous, as I tried that method in the fall of 1779; the succeeding winter proved very severe, as to frost, and but little snow; the consequence was, the loss of every tree so treated, and their worms not injured. On examining the trees in the spring, I found worms abundant as usual, and the effect the removing the earth had on them, was, causing them to injure the tree more, by descending the roots, as the cold came on; they returned to the surface as the weather warmed, and in picking them out, I found the bark dead, up to the place above whence the earth had been removed, as if a fire had been made round the tree, and the top as fresh as usual; it however died, with the approach of warm weather. The observation, that peach trees flourish in hedge rows, &c. I know is accurate; they also flourish in most places where the body is shaded; this I attribute to their being preserved from the effects of the sudden transitions, from heat to cold, and from cold to heat, which I apprehend are more destructive to peach and cherry trees, than insects, as I have had hundreds of fine trees to perish in one summer, after an irregular winter, without being in the least injured by worms.

Among many reasons for the opinion, that irregular winters are destructive to peach trees, one is, that from good authori-

ty, said trees live in Cape May county in this state, to the age of 30 or 40 years; an age, which I attribute to situation, the county being half surrounded by the waters of the Atlantic ocean and Delaware bay; and in the direction of the winds, that cause the warm spells here in winter, and which have not the same effect there, coming as they do, so immediately off those large waters; a proof of this is, that vegetation is generally two weeks later there than here, though so far to the southward.

From many observations and experiments, I have found that the worm most destructive to peach trees, begins to change to a *chrysalis* about the first of July, and remains in that state about two weeks, when they come out a wasp, and proceed to couple and lay their eggs near the roots of the trees, or in wounds in any other part; but do little injury, except in or near the roots, as, if attended to, the issuing of the gum will show their seat, and they are easily picked out; but their principal object is the root, the bark being softer there than on the body, and the rapid growth of the trunk near the root, at the time of the wasps depositing their eggs, causes a number of small rents in the bark, which give worms an easy entrance. I have observed that trees in a declining state, are more favourable to the increase of peach worms than those of a luxuriant growth, as the latter discharge so much gum from the wounds, as to cause the death of the insect, and the former will bring them into the wasp state a month sooner; for which reason I examine the peach trees carefully every spring, and those that are in such a declining state as to render them unprofitable, I hitch a team to, and draw up by the roots, as the most certain mode to destroy all the worms they may contain.

The best method I have yet discovered, to prevent injury from the worms, is to examine the trees carefully in the spring and take out the worms; repeat the operation about 1st July, and hill up the earth round the trees eight or ten inches: in October, remove the earth, examine as before, then renew the hill, which leave, till the spring examination. By continuing this process annually, I am confident that not more than one of my peach trees has been killed by the worms, for twenty that have died in consequence of irregular winters: and as I have observed the fluctuating state of the weather in winter, constantly to increase for more than fifty years, I conceive it must proceed from some certain cause, which I apprehend to be the improvement

\* Published by Kimber, Conrad, and Co.



of the country, every cleared field operating, when free of snow, as a reflector of the rays of the sun. That the clearing of the country is at least in part the cause of our variable winters, is rendered in some measure probable by a fact communicated to me, viz. that in the thinly settled parts of the country, peach trees flourish as well as they did formerly in the neighbourhood of Philadelphia: therefore it seems advisable to endeavour to find out some method to defend tender fruit trees from the effects of fluctuating winters; I can think of no better method to succeed, than binding straw round the body or trunk of the trees, that part appearing to be the seat of the disease.

#### CULTIVATION OF MADDER.

TO THE EDITORS.

*Philadelphia, Dec. 24, 1812.*

The editors of the *National Intelligencer* are desirous to receive information of the mode of cultivating the madder. The following account was obtained from a person in Asia Minor, who resided in the district of country where it grows abundantly, and who was employed in cultivating it.

"It grows most abundantly three, four, or five day's journey from Smyrna (say 120 miles) to the northward. It requires a rich and rather a moist soil. It must be well ploughed before the seed be sown, which is done in the same manner as wheat. The sowing season is from the middle of March to the middle of April. In this climate, for the sake of experiment, the time of sowing might be a little varied. The first year its appearance resembles grass; it will grow to the height of one foot, and during the arid months of June and July it dries up. The second year it grows to the height of nearly two feet, and produces a flower and seed like a pepper corn. In June and July it again dries up, and is cut and used as litter for cattle. The third year it grows three feet in height, and its leaves resemble those of the myrtle. It produces even at this age a flower and seed, and then dries up, and is also used for food and litter for cattle. The fourth year it grows but little higher than the third, and is thought to have attained its full height. After the plant has flourished, dried up and been cut, the roots are taken from the earth in the months of July and August. People who are rich leave them in the ground five, six, or seven years, and it is calculated that the root penetrates deeper into the

earth every year, and become 10 per cent. better in quality, the dye being better and stronger the older the root is.

"If the root be left in the earth longer than ten years, it runs into wood, which injures rather than improves the quality. When the root is taken from the earth, it must be left to dry about fifteen days in the sun, and freed from the earth adhering to it. The cleaner the root the better and clearer the dye. The seed of the first and second year is the best for sowing. If the ground be very moist, it had better be planted in rows, the mode adopted in Holland."

[*Am. D. Adv.*]

#### Political Economy.

*Fredericksburgh, (Va.) August 19.*

At a united meeting of farmers and merchants interested in the proposed alteration of the tariff on importations, at the town hall in this place, on the 12th instant, the following memorial to Congress was presented and read by colonel John Taylor, of Caroline, and unanimously adopted by the meeting.

*To the Senate and House of Representatives of the United States in Congress assembled,*

#### THE MEMORIAL

Of the Merchants, Agriculturists and others, of the Town of Fredericksburgh and adjacent Country,

RESPECTFULLY SHOWETH—

That being convinced that the protecting duty system has been and would continue to be pernicious to the United States, your memorialists respectfully submit to the consideration of your honourable body the following observations in relation to it.

Whether a freedom of exchanges or commercial restrictions, will most advance the prosperity of nations; whether an erroneous policy by one nation, requires an erroneous policy by another; whether economy or avarice suggests the idea of transferring capital from many occupations to one; whether justice decides that a portion of the labour of the poor ought to be appropriated by laws to the use of the rich; whether the limited powers over persons and property, delegated to the federal government, embrace the internal power of regulating the interests of manufacturers and agriculturists; and whether such a construction of the federal constitution would not include an internal power over all the interests of the manufacturers, the restrictions designed to establish a division of powers between the federal and state governments—are questions too extensive for the limits of a memorial, but sufficiently important to be suggested to the wisdom of Congress.

The present tariff was modelled by the mingled considerations of raising revenue, and encouraging manufactures. The revenue it produces, goes into the public treasury; and the bounties it bestows, into the pockets of capitalist manufacturers. Either as public revenue or

private bounties, it is a tax upon the national ability. The Congress which imposed the tax, undoubtedly estimated this ability; but since it was imposed, one half the national ability to pay taxes has been destroyed by the doubled value of money, and a reduction to the same amount in the value of products and property. Therefore the burden of taxation has been doubled, by circumstances without the agency of legislation, and if one half the duties were taken off, it would require the profits of as much capital to pay the other half, as sufficed to pay the whole when the duties were inflicted. One effect of this diminution in the ability to pay must be a diminution of revenue; because if the whole duty is continued, it will compel the payers to retrench their consumptions; and the value of the bounties bestowed upon manufacturers, being doubled by the doubled value of money, they would, under the present tariff, receive a pecuniary encouragement worth twice as much as that which was originally bestowed. If, therefore, one half of the duties imposed by the existing tariff were taken off, the other half would constitute the same real burden upon the nation, and the same real bounty to manufacturers, intended to be established by the representatives of the people.

To this eventual augmentation of taxation, without the concurrence of Congress, the public distress is owing in a great degree; and the question is, whether the evils inflicted by unforeseen circumstances, ought to be alleviated or increased by the representatives of the United States. In fact, whether the bounty to manufacturers ought to be quadrupled by law, because it has been doubled without law.

The protecting duty system, in its existing degree, has been already felt by the people and by the treasury. By diminishing the importation of commodities, it has already chilled commerce, and reduced the prices of our native productions. Commodities are a universal currency; their plenty or scarcity will therefore have the same influence upon prices, as the plenty or scarcity of money. An enhancement of home commodities, by the abundance of foreign commodities or currency brought to purchase them, is both a reimbursement for the consumption of these foreign commodities, and also furnishes a fund for revenue; whereas the expulsion of this currency diminishes the price of home commodities, deprives the people of many enjoyments arising from consumption, and lessens the means for the payment of taxes.

The enjoyments of consumption are the food of industry; diminish them, and it flags; leave them free, and it is invigorated; and this invigoration is a resource so ample for meeting the expense of an increased consumption, that every nation possessing it, will have the advantage in commercial competitions over those which do not. In struggles for wealth, industry will gain the victory; and a relaxation of its sinews, is like carrying on a war without ammunition.

True economy consists in a free employment of their own capital by occupations, as the best mode of making it productive; false economy, in legislative coercions of capital in other channels, because it cannot be employed with the same skill in new, as in habitual occupations. Drive a merchant to the plough, or a plough-

man to the counting-house, and the unskilfulness of both will cause mutual sloth, vexation and misfortune; and by diminishing a resource to meet the expense of consumption, contained in the knowledge and skill of habitual occupations, diminish also the public prosperity.

Legal dislocations of capital, besides producing the losses sustained by driving individuals from one occupation to another, are, moreover, universally the mode resorted to for imposing burdens on a great majority of nations, to foster some exclusive interest. They constitute an eleemosynary system for enforcing the poor to give alms to the rich, and in every form are the elements by which free governments are made oppressive.

The mercantile, naval, and agricultural occupations, are all discouraged by restrictions upon commerce, and must dwindle or flourish in conjunction. The agricultural supplies the basis of commerce: the mercantile imports the commodities which increase the value of those for exportation; and both supply the freights and wages which nurture the naval occupation, rear seamen, and provide the means for maritime defence. In the united prosperity of these occupations consists national prosperity itself; and their free efforts are an ample equivalent for the expense of consumption.

Re-exportations ought not to be forgotten. They extend commerce, increase seamen and shipping, and produce a mercantile profit. Single towns have often acquired opulence by being depots of foreign manufactures, and the more prosperous this branch of commerce is, the more the capital of every community is augmented. Mercantile intelligence, profiting by commercial fluctuations and circumstances, frequently derives profit from circulations, exchanges, and sometimes can undersell the fabricators themselves. It is insufficient to urge, that prohibitory or protecting duties will not destroy this branch of our commerce, because they are not paid on the exported commodities. The fact is, that no considerable surplus of these commodities are ever imported, except from the inducement of a double market; that they are invited by freedom of trade, and repelled by local restrictions; and that the freer the port, the more extensive and profitable this branch of commerce will become.

A free commerce is like a free government. Either isolated amidst commercial restrictions or political oppressions, flourishes beyond its neighbours by forbearing to imitate their errors. The Hanse Towns at one period almost absorbed the trade and wealth of Europe, because commerce was every where else subjugated to prohibitions and restrictions.

From all these sources of national wealth, the protecting duty system makes deductions which fall chiefly upon the poor, because the coarse and necessary articles of domestic manufacture, are consumed principally by them. But it is said that the tax thus inflicted upon the poor of all other occupations, goes to the relief of poor manufacturers. The fact would not be a justification of the policy; but even that is denied. The price of labour is regulated by circumstances which bounties cannot control. If a bounty was given to seamen navigating mercantile vessels, their employers would compute the



bounty as a portion of the wages, and continue to regulate them by a comparison with the price of labour in other occupations. In like manner, a bounty to the workmen or navigators of manufactories, must settle in the pockets of their employers, even if it was paid to the workmen themselves; but when it is attached to the goods sold by their employers, the chance of the workmen to receive any portion of it is so very feeble, that no symptoms of such an effect has ever been observed in England. And thus the protecting duty system imposes a tax upon the poor of all other occupations, which will be received by the rich of the manufacturing occupation.

It has been supposed that in a home trade between manufacturers and agriculturists, two capitals are retained—whereas one is exempted by the purchase of foreign manufactures. But the truth of this idea is also denied. No capital is lost by the purchase of manufactures; it is only exchanged, and both parties may profit by the exchange. Without exchanges, consumable capital can never be increased—but it must be diminished for the same reasons that an individual who should only use what he fabricates, would possess less consumable capital, than if he avails himself of beneficial exchanges. Exchanges consist of consumable articles. If consumption destroys what we receive, it destroys also what we pay. No permanent capital is produced either by commerce or manufactures, except by causing an improvement of land and buildings. Neither commerce nor manufacturing can create and embalm a capital against consumption. Wealth in consumable capital is constituted by the plenty of commodities—poverty, by their scarcity. Both merchants and capitalists offer to supply the community with consumable capital. Which is best, a small annual consumable capital or a large one? The large one can feed all our wants, encourage industry in all its branches, enhance all our commodities, and spare annually a surplus to meet the expenses of government. The small consumable capital can feed but a few of our wants, discourages industry in all its branches but one, depreciates all our commodities, and can spare nothing for government. By supposing that the little consumable capital could utterly exclude the great one, and contemplating the protecting duty policy in its utmost success, exactly as we have felt it occasionally in the cases of wars and embargoes, we may calculate its gradations. A large consumable capital is so essentially connected with national wealth, that governments, wherever it exists, may afford to be extravagant—but wherever the small one only exists, which manufactures without commerce can produce, they must be frugal. The difference lies between making a mercantile profit by foreign exchanges, and making no such profit. A frugal government, united with a free commerce, by leaving to the nation that portion of consumable capital, which oppressive governments take from it to pamper exclusive privileges, would probably pursue the most effectual policy for advancing the wealth, comfort and happiness of the people. A great annual consumable capital is so universally agreed to be among the good things of this world, that it is the very thing which all exclusive interests are in pursuit of. The pro-

tecting duty system proposes to deprive the community of a great mass of this species of wealth, the only kind really valuable to man; and to give it in return a support of the same species, of an inferior amount, saddled with a tax for the benefit of a few rich men, and attended with a necessity of resorting to some new mode of taxation for the support of government.

It has been fairly tried, by a gradual progress for thirty years; and having increased public expenses, exhausted the treasury in time of peace, contributed to a ruinous reduction in the prices of our commodities, and caused in no small degree, the general distress—another dose of the drug, which has produced such consummations, is proposed. Might it not be wiser to give a short trial to the rival policy, by repealing the present tariff, imposing duties exclusively with an eye to revenue, and re-establishing the freedom of commerce, than to persevere any longer? If one half the duties were taken off, it is probable that the revenue would not be diminished, as consumable capital might be doubled, and an increase of value by an increase of currency brought to purchase our commodities, might recover and establish the fact, that the greater are our comforts and enjoyments, the easier we can pay our taxes.

We think it a question between the nourishment of a monopoly by a tax to enrich the rich, and the nourishment of all useful occupations, by equal laws, in which a very few individuals occupy one interest, and all the rest of the community, with the government itself, another; and therefore we respectfully submit these remarks to the wisdom of Congress, with a conviction that the subject will receive the attention which its importance requires, and that the distresses under which we are labouring will not be aggravated.

And your memorialists, as in duty bound, will ever pray, &c.

#### PROTECT THE NATIONAL INDUSTRY.

The following communication from the New York Evening Post, though in its general views very sound, is liable to objection when it states, that the tendency of high duties on foreign manufactures, is to *enrich* manufacturers in this country; to enable them “to secure the independence of their own fortunes.” When a violent change is made in the direction of capital, those who from accidental circumstances are best prepared to turn their capital into the new channels, will have some advantage over others, but it will be of very short duration. Those who have erected machinery and are ready for manufacturing the goods proposed to be excluded or enhanced in price, will undoubtedly reap the first fruits. Those whose capital is unemployed, will come next, and they will be followed by all the capital that can find greater profit in manufactures than in its

present occupation. This will reduce the profits of manufacturers to a level with those of other employments. The profits of every one will be lower than they now are, for the same capital will exist in the country, and there will be fewer modes of employing it. If, however, the restrictive system should be carried so far as very much to reduce the rate of profits here, our capital will go elsewhere to find more advantageous employment, and we shall then experience a serious evil. The advocates for a forcible establishment of manufactures, (or any other mode of employing capital and industry,) are not aware of the evils that their success would bring upon the country.

If no capital but that at present employed in manufactures could be changed to that use, it would be true that the tendency of the measures recommended by manufacturers is to enrich themselves. The *owners of land* in England, have profited by the corn laws there, because the *supply of land* is limited. Farmers derive no benefit from them, for the rent is raised in proportion to the additional price of corn.

FROM THE NEW YORK EVENING POST.

Mr. Coleman—At the hazard of being discredited in your eyes, if you should ever chance to know me under any other than my assumed name, I assert that I am neither a merchant nor a manufacturer, and that I have not, nor has any connexion of mine, to my knowledge, any interest in the relative success of trade or manufactures, save as an American citizen, and a friend to our common country. I have, therefore, a right to express the disgust which I have felt at the loud and importunate claims which have been set up to exclusive patriotism by a set of men, the tendency of whose measures (whatever their designs may be) is to enrich themselves *at the expense of the country*. Yes, sir, when we hear so much of the necessity and duty of "protecting the national industry," and securing the national independence, by imposing high duties upon articles imported, for domestic consumption, the real object of these eloquent patriots is to be relieved from the evils of their indiscreet speculations, to obtain an extravagant reward for their *own industry*, and to secure the *independence of their own fortunes*, by imposing burdens upon the property and the industry of the rest of their fellow citizens, who have as good a right to a fair chance to get a living in these hard times, as the most patriotic manufacturer of them all.

"Protect the national industry," says Mr. Baldwin, who, I believe, lives in the largest inland manufacturing town in the United States; "protect the national industry and the national independence," says the National Society, composed of manufacturers and their friends and connexions, and so indeed say we, and so says every true American. But we would state for the information of Mr. Baldwin and his National

Society, a circumstance to which they seem not to have averted: viz, that this country is not entirely peopled by cotton or woollen factory men, and that all its wealth is not vested in stock of that description. Show us that any measures you can devise will have a favourable effect upon national industry and we will readily contribute our efforts for their adoption: but it must be the industry of the *whole* nation, and not a tax upon the industry of the whole for the benefit of a few monopolists. "Protect the national industry." Aye, we will do so—and more—we will protect the *fruits* of that industry, and thereby secure to each man the benefit of laying out the little money he has been able to save or earn in these pinching times to the best advantage. One benefit, and perhaps the only one resulting from the present depression of affairs, is the unusual cheapness of commodities. This renders tolerable a pressure which else could not be borne, and this alleviation of our hard lot, gentlemen, so please you, we wish to retain. We can scarcely earn enough now to obtain the necessities of life, and those comforts which habit has rendered necessary, cheap as they are, and we are not willing to tax our industry for your benefit, to make them dearer. We really cannot afford to pay an additional shilling per yard for the cotton for our shirts, nor an additional dollar for the cloth for our coats. But you say that you are far from wishing this—that you only mean to give domestic a preference over foreign manufactures, and not to impose an additional burden upon consumers. This is smooth and kind language, but let us understand what you really mean. To simplify the whole question, let us select the two most important items.

Why do you wish to increase the duties on cotton and woollen cloth to 33 1-3d per cent.? Tell the truth distinctly and without a flourish of patriotic profession. Is it not to enable you to sell your cotton and woollen goods for a better price? If you don't want this, what do you want? and if you get a higher price, must not we, the consumers, the rest of the nation, pay it?

This you must allow, but this, you say, is not your motive, your object is to render your country independent, by removing her dependence upon foreign supplies. That patriotism which leads directly and exclusively to enrich the patriot at the expense of the country is a little suspicious—but to return to the argument—Is not the object to be obtained (viewing the subject in this light) to secure ourselves as much as possible from any undue influence or control of foreign nations, and to get as much influence or control over them, as we can by fair means?

Now, we ask, how does the case stand in common life, and which has the greatest influence and power of coercion over the other, the employer and consumer, or the labourer dependent upon his continued occupation for his daily bread? The case cannot be put more strongly than it exists between us and Great Britain. She has an immense number of labourers, brought up to one precise mode of employment, which they cannot change, and who must either obtain employment, be starved, or fed on charity, and who are continually upon the verge of such distress and disorder as to endanger the safety of the country. America, thanks to Divine Providence, and our want of the English system of



protecting the national industry, is yet in a situation very different from this—we have yet nothing like her superabundance of distressed and turbulent labourers, and we depend on her for nothing which we cannot get elsewhere, or make ourselves, though at a dearer rate. In this state of things, which nation has the strongest hold upon the other?

Let it be understood that we are no advocates for dependence upon any foreign nation for any thing necessary either for subsistence or defence. But it is not pretended that we are so. We can make and fit out ships, appoint armies, and feed our own population. The question is whether we will not get our comforts and indulgences at as cheap a rate as possible.

But, says Mr. Baldwin and his co-patriots, all nations have made laws to protect their own industry, and shall we not profit by their wisdom. Alas! alas! when will nations be the better for experience. It is indeed true, that all nations have dealt lavishly in legislative enactments and compulsory provisions, to encourage and protect what they thought desirable. For a long series of centuries they *protected* religion by their laws, and the consequence was that hypocrisy, ignorance and abject superstition took the place of religious knowledge. Spain protected her wealth by laws against free trade and the exportation of specie, and she became poor and miserable. England protected her agriculture by prohibiting the importation of corn, and the consequence is that her poor labourers pay nearly twice as much for their bread as the labourers of any other country. Immense capital has been applied to the cultivation of poor soils, which nothing but the artificial prices occasioned by the restrictive laws could have subjected to the plough. Now these restrictive laws must be relaxed or the labourers will starve; and when they are relaxed the agriculturists must suffer. Now, even now, the agriculture of England is embarrassed.

The tax on woollens and cottons is now 25 per cent. Add to this the charges of freight and insurance in crossing the ocean twice, the commissions and profits of the merchants and factors on both sides of the water, and the tax of six pence sterling on every pound of wool, and six per cent. on the value upon cotton now imposed by the British government, together with all contingent expenses, and it will easily be perceived that our manufacturers have at least the advantage of 50 per cent. or one half over the English. In the name of all that is modest and reasonable, is not this enough? If after all this the English labourers still get a portion of our employment, it is simply because they are compelled to live poor and work hard to an extent to which no American will submit.

I am no believer in the exclusive claims of our manufacturers to a patriotic character, or to the favouritism of government. I believe that they established their manufactures for the same reason that merchants plan voyages and import goods, viz. to make money, and for no other reason. If the times have turned against them, I regret it, but am not willing to take their speculations off their hands, or to be taxed to support them. Still I wish them well, and it is partly because I do wish them well, that I hope their present clamours will be disregarded, and

their efforts to burden the rest of their fellow citizens defeated. If they are now gratified, the present establishments will be supported and continued, and new ones will go into operation. This will increase their numbers, their confidence, and their claims; they will ask for *more* protection and encouragement, and will probably obtain it; but finally the delusion will pass off; common sense and sound politics will prevail; the duties will be repealed—and as a revulsion usually goes back beyond the starting point, they will, probably, be made even lower than they now are; for there may arise such a thing as an anti-manufacturing party, and this party may be as unreasonable as its opponents. When this reduction shall come, and come it will, the greater the capital invested in these establishments, and the greater the number of persons employed by them, the greater the distress. None understand this better than the most sagacious and respectable of the manufacturers themselves. It is well known that some of these have incurred great odium among their brethren, by refusing to join in the petition for increased patronage. They frankly admit that government has done enough, and they are doing well enough, and they neither ask nor desire more. It is matter of regret, but it is inevitable, that some establishments, built at an enormous expense, and now in the hands of persons without capital, without skill, and in embarrassed circumstances—it is, I say, matter of regret, but inevitable, that some of these should languish and some become extinct. It would be unjust and ruinous to tax the country highly enough to support them. In this way the evil will cure itself, and in this way only can it be cured. A great deal has already been effected. There has been a great revival of occupation, and profitable occupation, for the factories, and every thing will go well if the extravagant pretensions now advanced are withdrawn, and industry and frugality take the place of unfounded clamour and party turbulence.

I have been seduced into a greater length of remark than I had intended. My intentions in taking up my pen was simply to express my disapprobation of the confederacy which seems now to be forming, and especially of the avowed design to elect none to the national legislature but such as are subservient to the selfish views of that confederacy. Be assured, gentlemen, you will in the end only make bad worse.

I may be induced upon some future occasion to add a word upon this subject, and in the mean time, shall take the liberty, notwithstanding the manufacturing monopoly of the term, to subscribe myself

AN AMERICAN PATRIOT.

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## Literature and Science.

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FROM THE NATIONAL GAZETTE.

### LITERARY NOTICES.

There is no literary journal in this country in which we take a more lively interest than the "Western Review," published at Lexington, Kentucky. Few persons, perhaps, on this side of the mountains, are aware even of its exist-

ence; and very few, we believe, of its strong claims to attention. It is not only an object of curiosity as a thriving product of a soil which might appear as yet incapable of supporting it, but it is a source of valuable instruction conveyed in a sensible, happy manner. The editorial articles particularly, of this Review, display considerable powers of composition; habits of philosophical research and reflection; and a manly candour and independence of spirit. Its main objects are announced to be, to develop the natural history of the western states; to improve their literary taste, and convey to them literary intelligence. Of its success in accomplishing the second of these objects, we have no doubt, if it continue to furnish samples of as good writing and just analysis as we have remarked in several of the numbers. Besides developing the natural history of the western states, it has contributed some remarkable details and anecdotes to the stock of their civil and military annals. The adventures of the early settlers with the Indians, which have appeared in it as communications, and have been copied into many of the daily papers, may be considered, if full faith can be yielded to them, as proper, piquant ingredients for history. But we are inclined to suspect these narratives of exaggeration. Brave and adroit as were the heroes of them, they were not less fond of the reputation of bravery and address, and would insensibly complicate the circumstances, and heighten the complexion of their exploits.

It might be supposed that this Western Review, ably conducted as it is, and apparently free from sectarian and party bias, would conciliate universal favour, at least in the state in which it is published. This, however, is not the case. We perceive that very elaborate attempts to discredit and stifle it are made in two of the Lexington papers. The western public can, we trust, readily distinguish the illiberality and evil tendency of such hostilities, which take their rise, no doubt, either in a paltry jealousy or in personal or political rancour.

We have examined the three last numbers of the "New York Literary Journal and Belles Lettres Repository." It is published monthly and printed in a very handsome manner. The original matter does not constitute the largest portion of its contents, but what there is shows that it is not without a solid reliance as to that particular. The borrowed pieces appear to us to be judiciously chosen. We should rejoice to see the essays extracted from the London Monthly Magazine, which treat of the genius and tendency of the poetry of Byron and Moore, widely spread throughout the United States. Those poets are the chief corrupters of the present world of refined English readers: no other living writers of celebrity have ventured upon pictures so licentious, and principles so impious and malignant. Their genius gives attraction and vogue to that which, without such aid, would be spurned by all who could wish to preserve a character for delicacy of sentiment and Christian rectitude.

A bookseller of New Haven has republished from the last London edition, *Jamieson's Grammar of Rhetoric and Polite Literature*. This is the best manual on the subjects of which it

treats, with which we are acquainted. Having had occasion to read it some months ago, we would express our entire concurrence in the opinion of the professor of rhetoric and oratory at Yale College, who says of it—"for fulness of valuable matter and clearness of arrangement, it is preferable to an elementary treatise, for the use of the younger student."

*Galvanism.*—Dr Hare, professor of chemistry in the medical department of the university of Pennsylvania, has published (in a paper to be found in the *Annals of Philosophy*, xiv. 176.) a theory of galvanism differing considerably from all those hitherto started. According to him, the galvanic fluid is a compound of caloric and electricity. The electricity is increased by the number of pairs of plates, and when this number is very great, as in Deluc's column, the calorific effects become evanescent. The caloric is evolved by the increase of the surface, and he has shown that it may be very intense when only a single pair of plates, or what is equivalent to it, is used. He has given us the drawing of a galvanic battery constructed on this principle, which produces intense ignition without any electrical phenomena.

As I have not yet had leisure to study the phenomena exhibited by this new modification of the galvanic battery, I should consider it as improper to make any remarks on Dr. Hare's ingenious hypothesis at present. What I have to say on the subject, therefore, I shall reserve for another opportunity.—*Dr. Thomson.*

*Literary Notice.*—The publisher of the American Journal of Science and the Arts, is authorized by professor Silliman to say, that the second number of vol. ii. will appear in all September. This number will contain as much or more matter than No. I. and will complete the volume. Patrons of the Journal of Science are respectfully informed, that the present volume is published in two numbers only, to gain time, which had been lost by the late embarrassment in the publication, and that for the year 1821, the numbers will appear as nearly quarterly as circumstances will permit.

It is yet a matter of experiment, whether this valuable work shall find sufficient patronage in the United States to sustain it. The literary and scientific public are already informed that the editor has assumed the responsibility of the publication, and although he may for a year or two consent to labour without compensation, it cannot be supposed that he will devote his services for a great length of time, to an object which will afford no adequate remuneration. Not a word need be said of the merits of the Journal of Science; they are abundantly known and acknowledged, to induce all confidence which can have any influence in procuring it support. We trust that gentlemen of science, and of literary taste, will give it a prompt and extensive patronage, which shall do equal honour to the merits of the work, to the talents and industry of the editor, and to the literary character of our country. [*Conn. Journal.*]

Professor Silliman is about to publish a volume of his travels in Canada.

The German Correspondent is about to be published monthly.



FROM THE NATIONAL GAZETTE.

## WEIGHTS AND MEASURES.

A few remarks on the standards of weights and measures may not, perhaps, be deemed unseasonable; as this subject seems now, very deservedly, to excite a good deal of public attention.

By a *standard* of weights and measures, is understood one, to which those of any country, or of all countries, may be compared, and conformed, and their agreement or relative values ascertained.

These standards may be either *arbitrary*, as is the case in England with the standard foot, pound, &c. deposited in the Tower and Exchequer, and from which, as originals, all the weights and measures of the kingdom and its dependencies, as also those of the United States, are regulated; or they may be *natural*, as is the case in France; where the length of a given arc of the meridian, or a determinate proportional part thereof, measured on the surface of the earth, is their standard of linear measure, and also, in fact, of their weights, and measures of surface and capacity. One ten-millionth part of a quadrant of the meridian [the distance from the equator to the north pole] is their *metre*, estimated at 39.371 English inches: the *arc*, which is the square of a deca-metre [100 square metres] is their element of superficial measure: the *stere*, which is the cube of a metre, is their element of solid measure: the *litre*, which is the cube of a deci-metre, [*i. e.* of the tenth part of a metre] is their element of all measures of capacity: and the *gramme*, which is the weight of a cubic centi-metre [*i. e.* of the 100th part of a metre] of pure water at its greatest density —42° Fahr. is the element of all their weights.

Another natural standard of measure, was proposed by Mr. Jefferson, while secretary of state, in 1792, but never finally acted upon; namely, the length of a cylindrical rod or pendulum, oscillating seconds, in a given latitude, with the details of its application.

On each of these standards I shall submit a few observations, chiefly with relation to the United States.

1. *On the Arbitrary Standards.*

These, perhaps, for all practical purposes, in the United States, might have the preference; and as England is the principal country with which we carry on commerce, and as her weights and measures are the only ones which we have ever used,

Congress would find no difficulty, on giving these a legal sanction, to ensure their prompt and universal adoption.\* If this regulation should take place, there ought, no doubt, to be introduced sundry modifications, which would greatly facilitate the business of commerce, as well as that of the counting-house. For instance—there ought to be but one unit of linear measure, the English foot,—which, indeed, is at present the case, though with different multiples and parts; one unit of weight—the avoirdupois pound—this being the only weight which is used in buying and selling; one measure of capacity, formed, perhaps, from the weight of a given volume of pure water: and let the multiples and fractions of these units, respectively, be expressed decimally; or, if in some instances thought more convenient, by small multipliers and divisors, forming doubles, trebles, quadruples, halves, thirds, quarters, &c.

2. *On the Natural Standard of France.*

This, it is obvious, differs, in its practical application, in no respect from a mere arbitrary standard; since it cannot be supposed that the United States, or any other country, would actually measure an arc of the meridian, even a single degree, (which the editor of the *Aurora* deems sufficient,) for the purpose of obtaining a true French metre, &c. And it may not be amiss just to glance at one or two sources of unavoidable error, if this attempt should ever be made. As the latitude of each extremity of the arc to be measured, must be determined by astronomical observation [taking the meridian altitude of some convenient star] the observer and instrument must both be very accurate indeed, if an error of one second of a degree may not be admitted as very possible: and as the errors at each extremity of the arc *may* conspire, they would in this case amount, in an arc of one degree, to one part in 1800 of the whole arc, or any fractional part thereof. Besides, to this must be added the possible error in the actual measurement of the arc itself.

3. *On the Pendulum Standard of Measure.*

In a late number of the *Aurora*, the editor (as I presume) states very fully, and fairly, a number of objections to this standard; namely, that “the vibrations will not

\* If Congress should think proper to adopt the measure here suggested, the Philosophical Society at Philadelphia can furnish correct authenticated copies of the English standard weights and measures.

be the same in the same latitudes or longitudes; nor the same on a plane as on an elevation; nor on the summit of mountains, as at the base or on the sides; but will vary in proportion to the elevation of the position, and will also vary according to the influence of heat and cold on the matter of which the pendulum may be composed. Besides, there are other objections, particularly in determining at what point of the *bob* (or weight) suspended at the extreme of the rod, the true point of oscillation is considered to commence, or from which the point of suspension is to be measured."

But, I apprehend that all these objections to the use of the pendulum standard proposed by Mr. Jefferson, may be readily obviated; and that without any great exertion either of mechanical or mathematical skill.

1. Let the pendulum be made of a cylindrical rod of iron, or any other convenient metal, about sixty inches in length; suspended on a knife-edge support, passing through a perforation in the rod, about one third of its length below the upper extremity.

2. Let this pendulum be attached to any good clock, and let the number of oscillations be observed which it will make in a sidereal day, that is, the interval of time between two successive passages of any one star over the same azimuth, as the vertical edge of a chimney, or the like, the eye of the observer being placed at some fixed point.

3. Let the latitude of the place of this observation, its elevation above the level of the sea, the mean temperature of the atmosphere during the time of the observation, the metal of which the pendulum is made, the proportion between its length and diameter, and the proportion between the part of the pendulum above and the part below the point of suspension, be all carefully noted.

4. Let any proportional part of the length of this pendulum be assumed as the unit-standard of linear measure. Or, rather, let the English foot be taken as this standard; and the proportion between it, and the whole length of the pendulum, be accurately ascertained.

From the above data, together with other facts relating to the subject, now well ascertained, the skilful mathematician will be enabled to calculate the proportion between the same unit of measure, and the length of any other pendulum employed, when any, or all, of the above circumstances or proportions, may be different.

And thus, by a very simple process, an accurate and universal standard of measure may be obtained; communicable in *words*, merely, to the people of any distant age or country; which, at a very small expense, will enable them, in little more than a single day, to furnish themselves with a standard of measure of the same value with the original standard.

The small errors which may unavoidably occur, whether in the original or subsequent experiments, will have a natural tendency to compensate each other. But, indeed, these small errors, especially where the experiments are repeated, and a mean taken, can produce but a very trifling, and scarcely appreciable effect of the final result. Thus, if there should be an error in the going of the clock, even of five oscillations (supposing them to be nearly seconds) in the day, the consequent error in the length of the foot measure, deduced from the experiment, would be little more than one thousandth part of an inch; and the possible errors in the other parts of the data will have still less effect.

If this subject should ever obtain the consideration of Congress, it would be necessary to have the original standard marked on all the different materials [iron, brass, wood,] on which models or copies would be taken for practical uses: for then, these copies might be taken, iron from iron, brass from brass, and wood from wood, at any time, without being affected by temperature; which would not be the case, if the original and copy were of different materials.

The standard of linear measure being determined, those of weights and capacity might be readily obtained by any skilful artist; especially taking advantage of the now well ascertained facts, that a cubic foot, English measure, of pure water, at the temperature of  $52\frac{1}{2}$  degrees Fahr., will weigh exactly 1000 ounces [ $62\frac{1}{2}$  pounds] avoirdupois; and that the volume of water is increased by a change of temperature from  $42^{\circ}$ , as in the following table:

32° . . . . .	vol. 1.00090
42 . . . . .	1.
52 . . . . .	1.00021
62 . . . . .	1.00083
72 . . . . .	1.00180
82 . . . . .	1.00312
92 . . . . .	1.00477

R. P.

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